(b) REMARKS

The claims are 24 and 26 with claim 24 being independent. Reconsideration of the claims is requested in view of the arguments presented hereafter.

Claims 24 and 26 were rejected as obvious over Suzuki '101 in view of Borsenberger "Organic Photoreceptors" and further in view of JP '265, Kawamorita '214 or Kovacs '313. The rejection is respectfully traversed.

Prior to addressing the grounds of rejection, Applicants wish to briefly review certain key features and advantages of the present claimed invention.

The present invention relates to an electrophotographic apparatus having a semiconductor laser of oscillation wavelength of 380 to 500 nm, hereinafter called "a short-wavelength semiconductor laser", as an exposure light source.

The present inventors have found that a conventional electrophotographic photosensitive member whose sensitivity is optimized to the short-wavelength semiconductor laser, sometimes shows a large fluctuation in its potential when it is used repeatedly, and provides a defective electrophotographic image.

The inventors determined that this problem is caused by excessive residual charges remaining in the photoconductive layer. That is, the shorter the wavelength of light emitted from a semiconductor laser, the stronger the energy of that light, and the smaller the size of the light spot formed on the surface of the electrophotographic photosensitive member. As a result, at the area of the photoconductive layer exposed by the short-wavelength semiconductor laser, an excessive amount of charges are generated. Usually, charges generated in the photoconductive layer are consumed by conducting the

steps of the electrophotographic process. However, when the quantity of the generated charges is excessive, some of them are retained in the photoconductive layer, and such retained or residual charges are accumulated.

In order to minimize this undesirable charge accumulation, the present inventors conducted experiments regarding various combinations of charge generating materials and charge transporting materials. The inventors determined that a combination of azo pigments as the charge generating material and the triarylamines represented by the formula (1) in parent claim 24 are unexpectedly efficient in reducing such undesired charge accumulation by short wavelength semiconductor lasers. .

The superiority of the azo pigment and instant triarylamine combination in a photosensitive member is shown in Table 1 on page 45 and in Table 2 on page 47 of the present specification. Namely, in Example 1 to Example 10, electrophotographic photosensitive members in which the above-mentioned combination is used, are employed. Each of the resulting electrophotographic photosensitive members shows superior stability after repeated use, i.e., Δ Vd and Δ V1 are small. Furthermore, regarding the electrophotographic photosensitive member in Example 5, the transmittance of the charge transfer layer is quite low, i.e., 30%. and Δ Vd and Δ V1 are still small, i.e., -40 and +10, respectively.

On the other hand, for the electrophotographic photosensitive member in Comparative Example 3, in which the charge transport material of Example 5 is replaced with that of Comparative Compound 1, shown on page 44 of the present specification, the transmittance of the charge transfer material is comparable to that of the Example 5

electrophotographic photosensitive member. However, Δ Vd and Δ V1 are quite large, i.e., -210 and -80, respectively. The superiority of the claimed combination of the present invention is, therefore, supported by such comparative experimental results.

In addition, since Comparative Compound 1 is a triarylamine not covered by the present claimed invention, it is obvious that the advantage of the present invention relies on the specific structure of the triarylamines of the formula (1) of the present invention.

Regarding the art rejection, Suzuki discloses that an electrophotographic photoconductor is required to exhibit spectral sensitivity in a broad wave range from the visible region extending to the near infrared region for use in a variety of electrophotographic apparatuses which employ a semiconductor laser beam as a light source, such as a laser printer and a digital copying machine.

The objective of Suzuki is to provide an electrophotographic photoconductor with high photosensitivity and capable of exhibiting flat spectral sensitivity in a broad wave range from the visible region extending to the near infrared region [0009]. Suzuki discloses that his objective can be achieved by an electrophotographic photoconductor having a photoconductive layer containing a phthalocyanine pigment and a specified disazo pigment [0035]. In Suzuki [0083] and [0084], over 36 different classes or types of positive hole transporting materials and electron transporting materials are disclosed. Each of these is said to be usable alone or in combination. Thousands of possible compounds are included in these classes. In Suzuki [0084], triarylamine

derivatives are merely disclosed as one of a laundry list of thousands of possible hole transport materials.

In Suzuki Examples 1, 4, 11, 14, 17, 27, 35 and 41, the charge transporting material is a triarylamine derivative similar in structure to instant Comparative Example 1.

Having admitted that Suzuki fails to disclose the specific hole transport material presented in the instant claims (and uses a triarylamine close to Comparative Example 1), the Examiner asserts that it would have been obvious to a person of ordinary skill to apply the hole transporting materials as disclosed in Borsenberger to Suzuki.

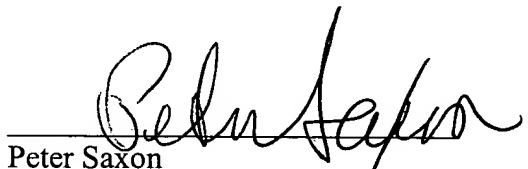
Borsenberger broadly relates to organic photoreceptors for imaging system and discloses tri-p-tolylamine and triphenylamine as donor compounds. However, Borsenberger is devoid of any disclosure about the technical problem which the present inventors have found regarding the electrophotographic apparatus in which a short wavelength semiconductor laser is employed. Borsenberger also fails to teach that tri-p-tolylamine and triphenylamine provides better results compared with other triarylamines, when used with azo pigments as a charge generating material in an electrophotographic apparatus using a short wavelength semiconductor laser. Accordingly, these is no motivation to arbitrarily combine the Borsenberger triarylamines with Suzuki. There are countless thousands of triarylamine compounds in existence. Without hindsight, one of ordinary skill would not understand there is any special advantage in selecting a Borsenberger compound for use in Suzuki. Moreover, Suzuki uses triarylamines which are different in kind than those disclosed in Borsenberger.

Furthermore, JP '265, Kawamorita and Kovacs merely disclose the sensitivity of the photoconductive layer to a short-wavelength semiconductor laser and are silent about the technical advantages of the present invention.

Thus, the teaching of the respective cited references fail to provide a sufficient basis for a reasonable expectation of success and therefore, the present invention is not obvious from the cited references. Moreover, unexpectedly superior results are obtained herein which rebut any possible presumption of obviousness.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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